



**VERIFICATION OF TRANSLATION**

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declare as follows

1. That I am well acquainted with both the English and French languages, and
2. That the attached document is a true and correct translation made by me to the best of my knowledge and belief, of

the patent application entitled:

**SACHET CLOSURE ASSEMBLY, SACHET THUS OBTAINED, AND  
PRODUCTION METHOD AND MACHINE**

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SACHET CLOSURE ASSEMBLY, SACHET THUS OBTAINED, AND PRODUCTION  
METHOD AND MACHINE

This present invention concerns the area of sachets  
5 equipped with a closure assembly designed to allow multiple  
successive openings and closures as required.

Still more precisely, this present invention concerns the  
manufacture of such sachets by means of closure assemblies  
that have two extrusions in thermoplastic material, consisting  
10 of complementary elements, designed to be joined alternately  
in order to allow closure of the sachets and then separated to  
allow opening of the sachets, and providing access to their  
contents.

In general, the aforementioned complementary elements are  
15 formed from hooked structures or respectively male and female  
elements provided on both extrusions. Many closure assemblies  
and sachets similar to the aforementioned arrangements have  
been proposed already.

Attached figures 1 and 2 show two known implementation  
20 examples of closure assemblies according to previous designs.

Attached figures 1 and 2 show assemblies the include two  
support webs 10, 20 bearing the respective complementary  
elements 12, 22. According to the non-limited representation  
provided in figures 1 and 2, these elements 12, 22 are formed  
25 from male and female extrusions respectively.

It will be observed that according to figure 1, both webs  
10, 20 are fitted on their internal facing surfaces, and on  
the outside of the extrusions 12, 22, with longitudinal  
striations respectively referenced 14 and 24.

30 The closure assembly illustrated in figure 2 includes  
similar longitudinal striations 16, 26 on the outer surface of  
the support webs 10, 20.

One of the functions of these striations is to facilitate  
the handling of the support webs 10, 20 in order to control

the opening and closure of the assembly, that is to respectively apply a force tending to separate the extrusions so as to separate the elements 12, 22 and to apply a force tending to bring the extrusions together so as to cause the  
5 two elements 12 and 22 to join. The striations 14, 24, 16, 26 are used in fact to guide the fingers of the user. In the context of the variant illustrated in figure 1, the striations 14 and 24 also perform the function of limiting the contact area between the two extrusions of the closure assembly and  
10 therefore avoiding the risks of welding during fixing onto a film.

The known closure assemblies have already rendered valuable service.

However they do not always give total satisfaction.

15 This present invention has as its objective to perfect the known closure assemblies.

This objective is attained in the context of the present invention by virtue of a closure assembly consisting of two extrusions in a thermoplastic material that include the  
20 complementary elements designed to be alternately joined in order to allow the closure of sachets, and separated to allow opening of the sachets, providing access to their contents, with the said complementary elements being carried on respective support webs, characterised by the fact that only  
25 one of the support webs includes striations projecting from its internal surface and directed toward the other web.

According to another advantageous characteristic of this present invention, the other support web is fitted with striations projecting from its outer surface.

30 This present invention also concerns the sachets created by means of such a closure assembly as well as a process and a machine for the manufacture of such sachets.

Other characteristics, aims and advantages of this present invention will appear on reading the detailed  
35 description that follows, with reference to the appended

drawings, provided here by way of non-limited examples, and in which:

-figures 1 and 2, described previously, show schematically, in cross-section, closure assemblies according to previous design techniques:

-figure 3 shows a similar view of a closure assembly according to this present invention, and

-figures 4 to 8 schematically represent five implementation variants according to this present invention.

Attached figure 3 shows a closure assembly according to this present invention which includes two support webs 100, 200 which are more or less parallel, respectively including a male closure element 110 and a complementary female closure element 210.

The general structure of such a closure assembly is very familiar to the professional engineer, and will not be described in greater detail in what follows.

Each of the two support webs 100, 200 lie respectively on either side of elements 110 and 210.

As illustrated in figure 3, it will be observed that, according to this present invention, only one of the support webs 100, 200 is fitted with longitudinal striations 230 on its inner surface and facing the other support web 100, and that this is on the part of the support web 200 located on the exterior of the extrusion elements 110, 210, in relation to the centre of the sachet.

The attached figure 4 shows an implementation variant which differs from that illustrated in figure 3 by the fact that the second support web 100 also has a series of longitudinal projecting striations 130 on its outer surface.

By "longitudinal" is meant that the striations 130 and 230 lie parallel to elements 110 and 210.

Preferably, the whole of the closure, that is the support webs 100, 200, the complementary elements 110, 210 and the striations 130, 230 are made from a thermoplastic material, and very advantageously by extrusion.

5        Figure 5 shows an implementation variant which differs from figure 4 by the fact that the arrangement of striations is reversed. According to figure 5, the internal striations 130 are provided on the inner surface of the web 100 carrying the male element, while the external striations 230 are  
10       provided on the outer surface of the web 200 carrying the female element.

Figure 6 shows an implementation variant according to which the complementary elements 110, 210 take the form of a hooked structure. Here again, the general structure of such a  
15       closure assembly, based on complementary elements of the hooked type is very familiar to the professional engineer, and therefore will not be described in detail in what follows.

Figure 7 shows an implementation variant according to which the two support webs 100, 200 are joined together in the  
20       form of a U-shaped structure by a connecting web 150 placed on the inside of the closure assembly, meaning on the side opposite to the area of the support webs 100, 200 carrying the projecting striations 130, 230.

Finally, attached figure 8 shows a preferred  
25       implementation variant of the invention which is characterised by the fact that each web fitted with striations has exactly seven striations.

By way of a non-limited example, each striation, which is of triangular section, has a height and a width at the base of  
30       the order of a 10th of one millimetre. The distance between two adjacent striations is preferably between 0.5 and 2 mm.

The number, the density, the size and the section of striations 130 and 230 can be the subject of many implementation variants. They are not limited to the  
35       illustrations provided in the appended figures. In particular,

it is possible to have striations of generally triangular section, as illustrated in figures 3 to 6 and 8, or a generally rounded section, as illustrated in figure 7. It is also possible to have striations 130, 203 which are partially joined, as illustrated in figure 3 or which are clearly spaced, as illustrated in figures 4 to 8.

In addition, the striations provided on the outer surface of a web can be identical or different, by virtue of their number, their density, their section and their size, in relation to the striations present on the other web.

Of course this present invention is not limited to the particular methods of implementation which have just been described, but extend to any variant that remains within its spirit.

In particular, this present invention is in no way limited to the methods of implementation illustrated in the attached figures.

The closure assembly according to this present invention can be manufactured, for example, by extrusion in the form of an independent assembly designed to be mounted on a film which is suitable for the manufacture of a sachet, or to be directly created from the material of such a film.

The closure assemblies according to this present invention have the advantage of allowing easy manipulation by virtue of the presence of the striations 130, 230, with no risk of locking up, which has been the case for certain closure assemblies of previous design, resulting from the contact between two opposing series of striations.

This present invention also applies to windows that include of complementary elements of the "velcro" type.